

REMARKS

The office action of 12-20-2004 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Original claims 1-12 remain pending and are believed to be allowable over the prior art based on the above amendments and the following arguments. Reconsideration is respectfully requested.

Preliminary Comments

The numbered paragraphs below correspond to the numbered paragraphs in the Office Action.

Objection to the Abstract

1. The abstract was amended to comply with formatting requirements as pointed out in the Office Action. No new matter has been added. The abstract is now less than 150 words.

Objections to the Drawings

2. The objections to the drawings have been addressed with a replacement set of drawings attached herewith. The changes which have been made are as follows:

- The direction control line in FIG. 2 was relabeled from 130 to 210.
- FIGS. 1 and 2 were labeled as "Prior Art".

The office action objected to FIG. 5 "because the unlabeled boxes shown in FIG. 5 should be provided with descriptive text labels." The Applicant respectfully notes that there are no boxes, labeled or otherwise in FIG. 5, so a correction can not be made in this regard. If the examiner meant something else, then clarification is respectfully requested.

The drawings are believed to be in a condition for acceptance, and the Applicant respectfully requests that the objections to the drawings be removed.

Rejection(s) under 35 U.S.C. §112

3. Claims 2, 5, 8, and 11 stand rejected under 35 USC 112, second paragraph for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Applicant respectfully disagrees that any of claims 2, 5, 8, or 11 are indefinite. The office action takes the position that the claims are indefinite because a particular version of RS 485 (year and date) is not specified in the claim. No such limitation was described in the specification or claims, and the Applicant respectfully disagrees with the examiner's attempt to improperly limit the scope of the Applicant's claim. A reading of the specification will show that an RS-485 communication protocol is used as an example of a half-duplex communication interface driver. The claimed RS-485 standard must have a half-duplex communication interface driver – This is the proper limitation to the RS-485 standard, not a version number. The applicant is not aware of an RS-485 standard of any year and date which is without a half-duplex communication interface driver.

As such, the applicant respectfully requests that the 35 U.S.C. 112 rejections against claims 2, 5, 8, and 11 be dropped.

Rejection(s) under 35 U.S.C. §103

4. Claims 1-12 stand rejected under 35 U.S.C. 103 as being unpatentable over the admitted prior art in view of Badie et al (U.S. Patent No. 5,490,219, hereinafter referred to as "Badie").

Claims 1-3:

Claims 2-3 are directly dependent on independent claim 1. FIGS 1 and 2 do not disclose a direction-switching rule executor for receiving said data sent out by said data transmission detector, and sending a direction switching signal via said direction control line to said half-duplex communication interface driver to set a transmission direction of said half-duplex communication interface driver to a sending direction when said data received from said data transmission detector is a signal 0 or a low signal, or sending a direction switching signal via said direction control line to said half-duplex communication

interface driver to set a transmission direction of said half-duplex communication interface driver to a receiving direction when said data received from said data transmission detector is a signal 1 or a high signal as claimed by the Applicant as part of independent claim 1. In fact, the automatic transmission direction controller 204 which the office action cites as performing this function must instead detect messages from both the bus 100 regarding the format and the transmission rate of the data to be sent as well as detect from the sending line the start bit in order to control the transmission direction. The apparatus of FIGS. 1 and 2 is incapable of setting a transmission direction based on data from a transmission detector. The prior art needs more input.

Badie does not supplement the shortcomings of the prior art. Badie teaches a noise canceling microphone with visual feedback, and does not teach or suggest a direction-switching rule executor for receiving said data sent out by said data transmission detector, and sending a direction switching signal via said direction control line to said half-duplex communication interface driver to set a transmission direction of said half-duplex communication interface driver to a sending direction when said data received from said data transmission detector is a signal 0 or a low signal, or sending a direction switching signal via said direction control line to said half-duplex communication interface driver to set a transmission direction of said half-duplex communication interface driver to a receiving direction when said data received from said data transmission detector is a signal 1 or a high signal as claimed by the Applicant as part of independent claim 1.

Neither the Prior Art, nor Badie, whether taken individually or in combination teach the discussed claim limitation. The Applicant believes both the Prior Art and Badie fail to teach other claim limitations, and the Applicant respectfully disagrees with the characterization of the prior art with respect to claims 1-12, but for the purposes of demonstrating that independent claim 1 is allowable over the prior art and Badie, the above argument is believed to be sufficient. The Office Action has not made a prima facie case for obviousness. As such, the Applicant believes that independent claim 1 is allowable over the prior art and Badie, whether taken individually or in combination. Similarly, dependent claims 2-3 are believed to be allowable over the prior art and Badie, whether taken individually or in combination, based on the allowability of their base claim and for the features contained therein. The Applicant respectfully requests reconsideration, and that the 103 rejection against claims 1-3 be withdrawn.

Claims 4-6:

Claims 5-6 are directly dependent on independent claim 4. FIGS 1 and 2 do not disclose a direction-switching rule executor for receiving said data sent out by said data transmission detector and generating a negative data in reverse to said data received from said data transmission detector; and said direction-switching rule executor sending a direction switching signal via said direction control line to said half-duplex communication interface driver to set a transmission direction of said half-duplex communication interface driver to a sending direction when said negative data is a signal 0 or a low signal, or sending a direction switching signal via said direction control line to said half-duplex communication interface driver to set a transmission direction of said half-duplex communication interface driver to a receiving direction when said negative data is a signal 1 or a high signal as claimed by the Applicant as part of independent claim 4. In fact, the automatic transmission direction controller 204 which the office action cites as performing this function must detect messages from both the bus 100 regarding the format and the transmission rate of the data to be sent as well as detect from the sending line the start bit in order to control the transmission direction. The apparatus of FIGS. 1 and 2 is incapable of setting a transmission direction based on data from a transmission detector. The prior art needs more input.

Badie does not supplement the shortcomings of the prior art. Badie teaches a noise canceling microphone with visual feedback, and does not teach or suggest a direction-switching rule executor for receiving said data sent out by said data transmission detector and generating a negative data in reverse to said data received from said data transmission detector; and said direction-switching rule executor sending a direction switching signal via said direction control line to said half-duplex communication interface driver to set a transmission direction of said half-duplex communication interface driver to a sending direction when said negative data is a signal 0 or a low signal, or sending a direction switching signal via said direction control line to said half-duplex communication interface driver to set a transmission direction of said half-duplex communication interface driver to a receiving direction when said negative data is a signal 1 or a high signal as claimed by the Applicant as part of independent claim 4.

Neither the Prior Art, nor Badie, whether taken individually or in combination teach the discussed claim limitation. The Applicant believes both the Prior Art and Badie fail to teach other

claim limitations, and the Applicant respectfully disagrees with the characterization of the prior art with respect to claims 1-12, but for the purposes of demonstrating that independent claim 4 is allowable over the prior art and Badie, the above argument is believed to be sufficient. The Office Action has not made a prima facie case for obviousness. As such, the Applicant believes that independent claim 4 is allowable over the prior art and Badie, whether taken individually or in combination. Similarly, dependent claims 5-6 are believed to be allowable over the prior art and Badie, whether taken individually or in combination, based on the allowability of their base claim and for the features contained therein. The Applicant respectfully requests reconsideration, and that the 103 rejection against claims 4-6 be withdrawn.

Claims 7-12:

Claims 8-9 are directly dependent on independent claim 7. Claims 11-12 are directly dependent on independent claim 10. Independent claims 7 and 10 claim in part a method for switching transmission direction of a half-duplex communication apparatus, including a half-duplex communication interface driver having a signal subtraction function. As the Office Action points out at the top of page 5, “the admitted prior art does not call for the half-duplex communication interface having a signal subtraction function.” Therefore, the office action argues that Badie teaches and suggests a half-duplex communication interface driver having a signal subtraction function. The office action even cites col. 2, line 30 to col. 3, line 49 in support of this allegation, in particular, Badie element 100. Element 100 is a noise canceling circuit for reducing noise on a microphone. Based on this description and a careful review of the cited text (and even the entire Badie patent), the Applicant can find no mention in Badie that there is a half-duplex communication interface having a signal subtraction function as claimed by the Applicant as part of independent claims 7 and 10. In fact, Badie does not appear to teach, suggest, or even be involved with a half-duplex communication interface, let alone one which had a signal subtraction function. Furthermore, Badie is an analog system, while the present application is a digital system. The Office Action admits that the prior art does not teach or suggest this limitation, and Badie clearly does not supplement the shortcomings of the prior art.

Neither the Prior Art, nor Badie, whether taken individually or in combination teach the discussed claim limitation. The Applicant believes both the Prior Art and Badie fail to teach other claim limitations, and the Applicant respectfully disagrees with the characterization of the prior art with respect to claims 1-12, but for the purposes of demonstrating that independent claims 7 and 10

are allowable over the prior art and Badie, the above argument is believed to be sufficient. The Office Action has not made a prima facie case for obviousness. As such, the Applicant believes that independent claim 7 is allowable over the prior art and Badie, whether taken individually or in combination. Similarly, dependent claims 8-9 and 11-12 are believed to be allowable over the prior art and Badie, whether taken individually or in combination, based on the allowability of their base claims and for the features and actions contained therein. The Applicant respectfully requests reconsideration, and that the 103 rejection against claims 7-12 be withdrawn.

Conclusion

Applicant believes claims 1-12 are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

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Dated: April 20, 2005

Amendments to the Drawings:

A replacement set of drawings is attached herewith. The replacement drawings contain no new matter, but do contain the following changes:

- The direction control line in FIG. 2 was relabeled from 130 to 210.
- FIGS. 1 and 2 were labeled as "Prior Art".